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SUMMARY OF RESEARCH IN HUMAN RELATIONS AND MORALE

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by

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The greatest number of human relations and morale studies carried on in the Naval Air Training Command in Pensacola during recent years have been concerned with the problems of evaluating the motivation of NavCads, our student aviators. In the main, these studies have been based upon data gathered from questionnaires and interviews. The ultimate goal of the research is the improvement of selection, and the enhancing of morale and motivational influences associated with the training program.

We have come to view the research to be presented here today on two levels of operation. The first level, which we may think of as the manifest level, is concerned with the individual's spontaneously verbalized "reasons" for entering or for withdrawing from ~~the training Program~~. Although we have concerned ourselves with the implications of these "reasons," they have been employed at face value in studies of their relationship to performance or involvement in the program.

The second level represents latent or less manifest elements of the individual which ^{are} ~~were~~ emerging as significant influences upon motivation in a military setting. In these studies, we have employed other instruments such as open-ended projective questionnaires designed to determine the nature of the individual's attitudes.

Studies concerned with these two levels shall be presented in the order indicated above, to be followed by a brief presentation of current, unreported findings, and projected research which should be of interest to this meeting devoted to planning and program guidance.

PART I

There is, perhaps, no more appropriate point of departure for a discussion of motivation than an evaluation of the individual's reasons for entering the situation within which his motivation is being studied. We

all recognize that there are unique problems for those individuals whose realizations upon entering a program are widely divergent from their anticipations, for those who enter one situation to escape another, for those who chose what they consider, a priori, to be the lesser of two evils in a forced choice situation (the draft), for those who respond to national pressures which evaporate after the irrevocable step has been taken, and for those constant seekers of the fiction of security.

A report of interview data gathered from NavCads withdrawing from training over an eighteen month period beginning early in 1950 indicated that many of these individuals had come into the training program with discernibly "poor motivation" at the outset (1). In this report it was pointed out that many NavCads accepted for training were "drifting" or "escaping" into Naval Aviation.

It is of some interest, therefore, to consider the reasons offered by NavCads currently entering training. A random sample of 276 entering NavCads were recently asked to give, anonymously, their "reason or reasons for having come into the Naval Air Training Program. The following factors were derived from the 855 reasons elicited:

Interest in aviation	- 20.93	per cent	
High school aeronautics	- .23	" "	
Training station near home	- .11	" "	
Prejudice toward naval aircraft	- .23	" "	
Superior naval aviation training	- 5.61	" "	
Threat of other military service	- 14.85	" "	
Civilian boredom and failure	- .70	" "	
Uncertainty of future	- .23	" "	
Escape family influence	- .23	" "	
To obtain commission	- 7.13	" "	
a. opportunity for career	- 3.62	" "	
b. to escape enlisted status	- 1.63	" "	
c. "better deal" (unspecified)	- 3.04	" "	
d. high calibre of associates	- 3.39	" "	
e. financial incentive	- 4.21	" "	
f. better utilization of ability	- 1.75	" "	
g. living conditions of officer	- 1.87	" "	

h. prestige of officer and aviator	- 1.98	"	"
i. uniform	- .46	"	"
Preparation for civilian future	- 9.70	"	"
To obtain college credit	- .23	"	"
Pressure of relatives and friends	- 5.14	"	"
Patriotic reasons	- 2.33	"	"
All friends in service	- .11	"	"
Travel, adventure, and excitement	- 2.92	"	"
Training program a challenge	- 2.22	"	"
Reputation of naval aviators	- 1.52	"	"
Physical and mental conditioning	- .93	"	"
Attractive recruitment propaganda	- .46	"	"
Pleasant recruiting officer	- .11	"	"

The results indicate that approximately 34.42 percent of the primary reasons given for entering the Naval Air Training Program concerned the avoidance of other type military service. This does not necessarily mean that this group has no interest in aviation. However, it probably indicates that if this group had a free choice they would remain civilians, but being faced with some form of military service they wished to select a field that resulted in the greatest personal advantages for them.

Obtaining a commission was given as a primary reason by 15 percent and as a secondary reason by another 55 percent with the major proportion of this 70 percent of the population indicating the threat of Selective Service as the primary factor in their decision. We gain some encouragement from the fact that 35 percent of the primary reasons reflected an interest in aviation. There is no means for establishing what might constitute "expected" percentages for these two factors in such a population to afford the statistician the usual basis for discussion. They merely represent some of the limits within which we must operate and bring a keen awareness that such statistics also promise to be sources of morale problems in the situation where they obtain.

An appraisal of the "reasons" given by cadets for withdrawing from the program was conducted through interviews with over 160 NavCads checking out on their way to civilian life. (1) This last factor is important because

the current practice of retaining the man in an enlisted status might have influence upon the extent to which such "reason" given in interviews approximate actuality. As expressed by the cadets themselves, the following major reasons emerge:

1. Distaste for flying
2. Objections to certain instructional techniques
3. Boredom resulting from periods of waiting
4. Lack of group identification in flight training
5. Certain factors external to the training program, e.g., girl involvements, family pressure, etc.

The investigators in this particular study sought to identify other factors not expressed directly in the interviews but temporarily, or causally related.

These situational factors were identified as:

1. Changes in standards of performance in training
2. Abrupt administrative changes
3. Political changes as regards the Korean conflict, Selective Service Laws, and the like
4. Increased job opportunities
5. Societal changes in the realm of public opinion toward the aviator's role, toward patriotic duty, and toward the military services.

The implication of this study is particularly relevant to the report presented above of ^{NavCad} ~~cadet~~ "reasons" for entering Naval Air Training. Limitations of time deny a complete review of those reasons and their relationships to the factors identified in this study. But indicating a few, might underscore the fact that some individuals entering a program, whatever its nature, do so with reasons which make them extremely vulnerable and poor morale risks. This would be especially true of the very large proportion to enter Naval Aviation Training to escape something else. The NavCad who entered the recruiting office with the flag flying in his eyes had unique problems of adjustment as the country quickly returned to "business as usual" and he received letters implying that he had been a "sucker." The NavCad who sought a commission or security had to adjust to letters from High School or college

classmates who were making 400 dollars and more per month as semi-skilled and skilled labor. His lot is no easier when confronted with Johnson cut-backs and Davis amendments. For individuals charged with conducting a training program, certain of these situational factors are far beyond their control. In some instances, their impact upon a group can be anticipated and such steps as the military situation allows can be taken to counteract the resulting decrease in morale. One interesting attempt at official control of DOR at Pensacola, has served to establish the basic nature of those morale factors resulting in voluntary withdrawal. There are other morale factors which one must learn to accept as a natural part of the situation, e.g., adjusting to mass produced chow after mother's special attention. Then, too, there are certain "needs" which the individual expects to have fulfilled through identification with the military, a decision determined more by wishful than careful thinking.

The only recourse for the director of placement or selection, is the determination of as many factors predisposing to poor morale as possible and selecting on the basis of them. This represents one of the points mentioned earlier where the study of morale and motivation invades the area of personnel and selection.

An appraisal of bibliographical material was conducted with a sample of 119 NavCads who had successfully completed Basic Training, 121 NavCads who had attrited for Ground Training or Flight Failure, and 135 NavCads who had withdrawn from the program (2). The results, pertinent to selection, included:

1. Both the DOR* and failed groups were significantly older than the successful group.
2. Both the DOR and failed groups included significantly more NavCads over 23 years of age while the successful group had significantly more NavCads under 21 years of age.

3. Both attriting groups had significantly more formal education than the successful group. The DOR group had twice the percentage of college graduates as the successful group.
4. The failed group of NavCads showed a significantly greater history of college failure than the successful group. (The same was true of the DOR group although the level of significance did not quite meet the 5% level of confidence demanded in this study for significance.)

With morale as the major concern of this panel, the picture presented by this particular DOR population deserves study. They are older, have more formal education, and have experienced more failure in their educational history. All of these factors exert their influence upon morale. The influence of these factors upon motivation and level of aspiration require further study. Furthermore, the individuals' reaction to authoritative discipline, and other features of the military also requires appraisal. The difficulties experienced by ^{a similar} the same group as reported at the last meeting in a study for another branch of service indicates that this problem is not unique with Naval Aviation.

* The letters DOR are commonly used as an abbreviation for "dropped at own request."

PART II

Now let us consider the studies devoted to determining the unverb-
alized elements implied or derived from interpretation. The two studies to
be mentioned were based upon essentially the same rationale, namely, that
certain of the social attitudes which an individual brings to a training
situation will influence his level of morale and motivation there. In the
case of all of these studies the attitudes scrutinized were interpersonal
in nature.

The first study in this group solicited anonymous responses from ^{New Cadets} Cadets
to a critical-incident type questionnaire wherein they were asked to report
first on their "best" and then on their "worst" instructor. The sample
utilized consisted of a group of 72 ~~cadets~~ who were withdrawing from training
at their own request and 65 ~~cadets~~ who had successfully completed the first
major phase of flight training, Basic. These two groups were referred to,
respectively, as the "low" and the "high" motivation groups. A content
analysis of the responses from the two groups revealed that the cadets in the
"low" motivation group reported significantly more incidents of instructor
competence or incompetence while the "high" motivation group tended to report
significantly more incidents involving interpersonal relationships with in-
structors. Overall, it was concluded that the cadets in the "high" group
were more readily disposed to identify with authority-figures -- that is,
officer-instructors -- than were the "lows."

One question which this research did not satisfactorily answer was the
extent to which the attitudes which were studied had been conditioned by
the training experience. It might have been argued, with justification, that
the differences found in attitude toward the officer-instructors were a

function of motivation -- rather than the converse. As a consequence, a second project with considerably more subjects was undertaken in which ~~cadets~~ ^{Nov Cadets} entering training were asked to respond to a similar form dealing with instructors previously encountered in high school or college. Follow-up data was then gathered, after a period of six months, relative to the disposition of the 300-odd ~~cadets~~ ^{subjects} in the study sample. An analysis of the responses given by ~~the cadets~~ ^{these} who subsequently withdrew from training at their own request was then initiated and contrasted with a parallel analysis of the responses given by ~~cadets~~ ^{these} who had remained in training. These two groups exhibited the same differences relative to attitudes toward high school and college teachers as the previously studied groups had shown in the military situation. Thus, there was some basis ^{for} concluding that these attitudes not only accompanied varying levels of motivation -- as we have here defined it-- but, furthermore, had their roots in earlier experience.

CONCLUDING COMMENTS

Yet to be reported upon are a number of studies in which projective questionnaires of the sentence completion type are being administered to groups of ~~cadets~~ ^{Nov Cadets} who have withdrawn from or failed in training as well as to a group ~~of cadets~~ who are successful in training, the latter group serving as a control. In addition to these, a study is nearing completion in which the role of social values is being evaluated as a differential predictor of success in training. The ultimate purpose to which the findings of these investigations will be directed is that of improved selection.

One major project still in the data-gathering stage involves the development and refinement of an attitude inventory which is made up of items dealing with various social institutions and forms. While in a markedly different guise, this inventory utilizes the same conceptual model discussed

in connection with the studies of authority -figures, and peers. A preliminary analysis of the data obtained from several hundred NavCads to whom the inventory was administered at the outset of training has indicated that certain of these attitude-items discriminate at a significant level between ~~cadets~~ ^{those} who later withdraw from, as opposed to those who remain in training. It is hoped that, ultimately, these items may serve as a nucleus for the development of an attitude scale which will effectively identify applicants whom we might predict will be inadequately motivated or maladapted in training. *Similar to Project MAIP-p6 Army report.*

Another problem which is currently being pursued concerns the development of a more adequate criterion of motivation. One project in this area has attempted to define motivation in terms of a discrepancy score between the individual's ability level as measured prior to Pre-Flight and his performance level while in Pre-Flight. It should be emphasized that the individual in each instance is being compared with himself. Even a brief consideration of this problem will indicate that there are various difficulties which arise. For one thing, one may question whether an ability measure -- say the ACT-- correlates at a sufficiently high level with Pre-Flight grades to warrant the assertion that a negative discrepancy of some magnitude may be considered to be indicative of flagging motivation or vice versa. At any rate, some exploratory work on this problem has been done making use of the ACE Test as an ability measure and the final academic average at Pre-Flight as the performance measure. The results indicate that individuals who later DOR in flight training show a marked and significant inclination toward a negative score while ~~cadets~~ ^{those} who are successful in Basic Flight training are equally inclined in the positive direction. An expansion and intensification of this research is now underway. Ultimately it may serve to provide cues in Pre-Flight to a

later manifestation of inadequate motivation in Flight Training. Furthermore, it is intended that, with the introduction of objective flight grading, this criterion may be investigated at the flight level.

Moving for a moment out of the realm of motivation and morale studies, some mention might be made of a project recently completed, but as yet unpublished, in the sphere of leadership identification. In this investigation, use was made of the buddy-nomination form which has been used widely in similar settings. ^{Van Cals} Cadets in their third month at the Naval School of Pre-Flight were asked to nominate members of their section for a position of military leadership. A leadership score was then developed for each ^{individual} cadet on the basis of these nominations. This score was thereupon correlated with scores which the ^{man} cadet had obtained on a variety of measures, among them ^{one} a measure of authoritarianism, the California F-Scale. The hypothesis under test was that there would be a significant positive relationship between scores on leadership and scores on authoritarianism, as measured by this scale; it will be recalled that a "high" score on the F-Scale is considered to be "authoritarian." The results obtained were negative. It was found that there was a low, but nevertheless significant, negative relationship between the leadership score derived from buddy-nominations and the score attained by the cadet on authoritarianism. Furthermore, it was found that the ACE test correlated positively with the leadership score and negatively with the authoritarianism score. Correction was then undertaken by the computation of a partial r between leadership and authoritarianism with ACE held constant; the relationship remained negative and still significant although, of course, diminished somewhat in magnitude. Finally, it was found that of all variables the ratings given the ^{Van Cals} cadets on "military bearing and discipline" (OLQ) by the Marine officers

in charge of discipline correlated at the highest magnitude ($+ .55$) with the leadership scores, but did not correlate beyond the zero level with authoritarianism. It was concluded from this study that within this context a predisposition toward authoritarianism is contraindicative of selection by peers for a position of military leadership; that intelligence forms a significant positive component of buddy-nominations in this setting; and, finally, that the situation acts to specify "leadership" as reflected in the relatively high correlation between OLQ ("military bearing and discipline") and the buddy nominations.

These results are of particular interest due to their relationship to findings of a previous study which indicated the ^{NavCad}cadets' perception of the military leadership role to be essentially authoritarian. That there should exist a difference between this perception and their actual selection of a leader perhaps is not too surprising. It will be recalled from The American Soldier, for example, that enlisted men indicated that they would be more democratic were they in a position of leadership while, at the same time, they continued to accept such leadership as was accorded them by the military institution. This duality does provide the basis for some further research, which we hope to implement, in the area of role perception as opposed to role function.

In closing this report, it might be desirable to review briefly the current tasks underway at Pensacola. First, we are attempting to identify potential cases of withdrawal as early in training as possible; second, we are seeking to develop and validate an attitude inventory which may serve as an indirect measure of motivation; third, we are endeavoring to study and improve the morale of the on-board NavCad population by suggesting appropriate changes in the training situation; and fourth, we are studying some of the

situational requirements of leadership specific to our major goals of
more efficient selection and improved conditions of training.

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* The studies listed below were completed at the U. S. Naval School of Aviation Medicine, NAS, Pensacola, Florida.